

Date: November 18, 2014

To: Thomas J. Bonfield, City Manager
Through: W. Bowman Ferguson, Deputy City Manager
From: Donald F. Greeley, Director, Water Management
Subject: Dam Inspections, Maintenance and Rehabilitation Project – Contract Award to Schnabel Engineering

Executive Summary

The Department of Water Management (DWM) issued a Request for Qualifications (RFQ) for Professional Engineering Services related to:

- A) Annual dam safety inspections, Operation and Maintenance (O&M) Plan updates, and Emergency Action Plan (EAP) updates at Lake Michie and Little River Dams;
- B) Development of a 50-year plan for rehabilitation, capital improvements, and preventative maintenance of all dam structures and pump station equipment at Lake Michie and Little River Dams; and
- C) Design services for removal of trees in the Lake Michie Dam embankment and repair of the non-functioning intake gate and screen at Little River Dam.

The DWM received three proposals on August 14, 2014 in response to the RFQ. The firm Schnabel Engineering South, P.C. was selected based on the qualifications presented and a scope of services for the project has been negotiated for the amount of \$986,542.00.

Recommendation

The Department recommends that the City Council:

1. Authorize the City Manager to execute a contract with Schnabel Engineering South, P.C. for Professional Services for Dam Inspections, Maintenance and Rehabilitation at a contract cost of \$986,542.00.
2. Establish a contingency fund in the amount of \$98,000.00.
3. Authorize the City Manager to negotiate change orders provided that the cost of all change orders does not exceed \$98,000.00 and the total project cost does not exceed \$1,084,542.00.

Background

The DWM operates two raw water supply reservoirs which were impounded by the construction of the Lake Michie Dam (completed 1927) and the Little River Dam (completed 1987). In order to ensure that the structures are sound, safety inspections must be conducted on the dams annually. Additionally, EAP updates are necessary protect both the City's water supply as well as downstream property owners. Another important aspect for a successful program is regularly updating O & M Plans to account for modified equipment or new operating procedures.

The long term planning will assist the DWM with prioritizing capital improvement projects to ensure the best use of financial resources. A 50-Year Plan is proposed for both of these aging facilities to identify necessary rehabilitation projects and maintenance procedures that should be implemented in order to keep the dams and pump stations functional into the future.

Trees growing in the Lake Michie Dam embankment have been identified as a long term safety concern, and removal of these trees by a qualified professional familiar with earthen structures is needed. In addition, the intake gate and screen at Little River Dam is not functional due to unknown causes. An engineer with expertise in raw water intake structures is necessary to appropriately evaluate the problem so that a repair can be made in order to restore full operational capability to the raw water pumping station.

Issues and Analysis

The DWM advertised a RFQ in July 2014. Three firms responded to the RFQ on August 14, 2014:

Freese and Nichols, Inc.
Hazen and Sawyer, P.C.
Schnabel Engineering South, P.C.

Based on the proposals submitted, two firms were short listed to present their qualifications to the selection committee. The selection committee was made up of staff from the DWM and the Equal Opportunity/Equity Assurance (EOEA) Department. Schnabel Engineering South, P.C. was selected for the project based on their qualifications and experience.

Alternatives

Alternative 1: Do not move forward with the project. This alternative is not recommended because annual safety inspections and the associated document updates are a critical component of continued safe operation of these facilities and protection of downstream property and residents. Furthermore, a long term plan for rehabilitation and maintenance of the dams and pump stations will be required in order to meet the City's goal of keeping these facilities functional for another 50 years.

Financial Impact

The necessary funds are available in the DWM Lake Michie Dam Repairs budget:

ORG	OBJ	PROJ	AVAILABLE
4100P761	764000	P0500	\$340,000
4100P762	764000	P0500	<u>\$1,860,000</u>
			\$2,200,000

SDBE Summary

The Equal Opportunity/Equity Assurance Department reviewed the proposal submitted by Schnabel Engineering South, PC of Cary, North Carolina to determine compliance with the Ordinance to Promote Equal Business Opportunities in City Contracting. The goals for this project are MSDBE 0% and WSDBE 2%. It was determined that Schnabel Engineering South, PC, is in compliance with the Ordinance to Promote Equal Business Opportunities in City Contracting.

SDBE REQUIREMENTS

Schnabel Engineering South, PC will subcontract to the following certified firm:

Firm	ID	City/State	Amount	% of Contract
CH Engineering, PLLC	WSDBE	Raleigh, NC	\$ 19,800.00	2.0%

WORKFORCE STATISTICS

Workforce statistics for Schnabel Engineering South, PC are as follows:

Total Workforce	34	
Total Females	10	(29%)
Total Males	24	(71%)
Black Males	0	(0%)
White Males	22	(65%)
Other Males	2	(6%)
Black Females	1	(3%)
White Females	7	(20%)
Other Females	2	(6%)